Report to Congress
On Air Cargo Security

Washington, D.C. 20591 May 1998

Report of the Secretary of Transportation
to the United States Congress
Pursuant to Section 313 of the Federal
Aviation Reauthorization Act of 1996
(P.L. 104-264)

INTRODUCTION

This report is submitted in response to the requirement in section 313 of Public Law 104-264, the Federal Aviation Reauthorization Act of 1996. Section 313(a) states that the Secretary of Transportation shall transmit to Congress a "report on any changes recommended and implemented as a result of the White House Commission on Aviation Safety and Security to enhance and supplement screening and inspection of cargo, mail, and company-shipped materials transported in air commerce."

BACKGROUND

On July 17, 1996, prior to the formation of the White House Commission on Aviation Safety and Security, the Aviation Security Advisory Committee (ASAC) formed the Baseline Working Group (BWG) in an effort to strengthen the domestic aviation security baseline; i.e., the everyday security measures in effect. Recognizing the complexity of developing an effective and efficient security baseline for air cargo, the BWG formed the Cargo Working Group (CWG) in September 1996. This group had representation from all elements of the air cargo industry and was established to recommend enhancements to the current security requirements for cargo carried on passenger aircraft.

The CWG forwarded its recommendations for enhanced air cargo security to the BWG. These recommendations included clarification of the definition of a known shipper and strengthened procedures for oversight of the Indirect Air Carrier Security Program, inspections of cargo, and cargo security training. The BWG concurred with the CWG recommendations, and the working groups were discontinued when the ASAC issued the *ASAC Domestic Security Baseline Final Report* on December 12, 1996.

On July 25, 1996, President Clinton formed the White House Commission on Aviation Safety and Security, to be headed by the Vice President. The President also announced increased security measures applying to passengers and cargo, including preflight inspections of cargo holds on passenger aircraft. The White House Commission recommended that the Federal Aviation Administration (FAA) implement a comprehensive plan to address the threat of explosives and other threat objects in cargo. In so doing, the White House Commission recommended that the FAA work with industry to develop new initiatives in this area.

After careful review of the White House Commission recommendations, the FAA requested that ASAC reconvene the CWG with its original membership. This group, now known as the Cargo Baseline Working Group (CBWG), compared the recommendations

of the White House Commission with those of the ASAC. On July 23, 1997, the CBWG provided to the ASAC its amplified recommendations and responded to certain issues that the White House Commission raised but had not been addressed in the original ASAC report. Other White House Commission recommendations are being further evaluated by the FAA.

ASSESSMENT OF EFFECTIVENESS OF THE CHANGES RECOMMENDED AND IMPLEMENTED AS A RESULT OF THE WHITE HOUSE COMMISSION RECOMMENDATIONS

In the wake of the TWA Flight 800 disaster, the White House Commission was asked to focus its attention initially on aviation security. The White House Commission, on its part, took under advisement the recommendations of the *ASAC Domestic Security Baseline Final Report* and formulated its own recommendations on cargo. The White House Commission's final report was issued on February 12, 1997. The Department of Transportation (DOT)/FAA assessed the White House Commission's recommendations regarding air cargo together with related recommendations from the BWG. The DOT/FAA position and the status of FAA efforts on each issue are as follows (the recommendations of the White House Commission are italicized):

- ***"The FAA should implement a comprehensive plan to address the threat of explosives and other threat objects in cargo and work with industry to develop new initiatives in this area."***
- ***"The FAA should place greater emphasis on the work of teams, such as the Aviation Security Advisory Committee and the Baseline Cargo Working Group, to address cargo issues."***

  Related BWG Recommendation: No related recommendation.

  FAA Position: The FAA agrees with these recommendations and has worked closely with both of the above groups, as well as with the U.S. Customs Service and the USPS. In response to these recommendations, the FAA has proposed comprehensive security program amendments directed at cargo. These amendments were sent out to the regulated parties for comment on April 29.

- ***"The Commission believes that the FAA should implement the Baseline Working Group's recommendation with regard to profiling by 'known' or 'unknown' shippers."***

Related BWG Recommendation: "Tighten the definition of 'known shipper' to ensure a greater measure of security in the transportation of cargo on passenger aircraft."

FAA Position: Through substantial changes proposed to the domestic requirements of the Air Carrier Standard Security Program (ACSSP), the Foreign Air Carrier Model Security Program (MSP), and the Indirect Air Carrier Standard Security Program (IACSSP), the FAA will tighten the definition of known shipper as was originally recommended by the CBG and later amplified by the CBWG. The proposed security program amendments were issued for comment on April 29.

In May 1997, the FAA issued proposals to change the security programs to implement various recommendations of the White House Commission and the BWG as a result of industry comments and recommendations by the CBWG. In light of industry comments and further consideration by the CBWG, the FAA has revised its proposed definitions of known and unknown shippers.

- ***"In addition, unaccompanied express shipments on commercial passenger aircraft should be subject to examination by explosives detection systems;"***

Related BWG Response: "Express cargo (defined as 'over the counter' shipments tendered to passenger-carrying airlines) should not be subject to any special requirements. Rather, the same profiling techniques applied to other categories of cargo should apply."

FAA Position: The FAA agrees with the BWG and the CBWG that the treatment of express cargo should exceed the White House Commission recommendations. Express cargo should not be limited to examination by explosive detection systems only. The FAA also agrees with the CBWG proposal that a shipment by a known shipper paying cash shall not be transported unless the shipment is subjected to additional security control measures. These security measures are currently being proposed for incorporation into the security program. Amendments were issued for comment on April 29.

- ***"The FAA should work with industry to develop a computer assisted cargo profiling system that can be integrated into airlines' and forwarders' reservation and operating systems;"***

  Related BWG Recommendation: No related recommendation.

  FAA Position: In view of the potential merits of this recommendation, the FAA contracted with a recognized expert in the field of profiling to conduct a study in this area. This study reviewed existing methods and systems, compared their capabilities with the FAA's preliminary requirements, and made recommendations on how the FAA could proceed. The final report on how to proceed to develop a computer-assisted cargo profiling system was issued on August 4, 1997. Accordingly, the FAA is working cooperatively with the U.S. Customs Service to develop a system which will meet FAA security requirements. The FAA will also be working in coordination with the air cargo industry and third parties to try to develop a system which can utilize the existing operating system of each air carrier or forwarder. It is expected that this system will provide a meaningful cargo profiling capability without disrupting the operation of the air cargo industry.

- ***"Requirements should be implemented requiring trucks delivering cargo for loading on planes be sealed and locked;"***

  Related BWG Recommendation: No related recommendation.

  FAA Position: The FAA has developed a proposal to provide greater security with regard to truck deliveries of cargo, and security program amendments were issued for comment on April 29.

- ***"The FAA should develop and distribute air cargo security training materials;"***

  Related BWG Recommendations:

  "FAA, in cooperation with the air cargo industry, establish a training program directed to passenger air carrier, indirect air carrier, and contract ground service personnel. The training program will:

  - Include cargo acceptance and ground transport measures;

- Require initial and recurrent participation and documentation;
- Be incorporated in the Air Carrier Standard Security Program and the Indirect Air Carrier Standard Security Program"

FAA Position: The FAA is working with the CBWG to develop training guides for industry and to develop proposed changes to security programs. The FAA also developed a Cargo Security Basic Course that will familiarize newly hired FAA cargo security and dangerous goods inspectors with the program. As of December 1997, three classes had been completed and 50 inspectors trained. The remaining 82 inspectors will be trained in fiscal year 1998.

- ***"And enhanced forwarder and shipper employee screening procedures should be developed."***

Related BWG Recommendation: No related recommendations.

FAA Position: This recommendation pertains to background investigations of forwarders' and shippers' employees. These investigations could include employment verification and criminal history record checks, as needed. The CBWG recommended that the regulatory language in part 109 of the Federal Aviation Regulations (14 CFR part 109) be amended to require that indirect air carriers conduct access investigations for new employees with access to cargo when such cargo is in the control of the indirect air carrier. The FAA is considering this in its overall evaluations of needed legislation.

DOMESTIC AND FOREIGN MAIL AND CARGO SHIPMENTS

Prior to the White House Commission on Aviation Safety and Security recommendations in 1997, the Aviation Security Improvement Act of 1990 (P.L. 101-604) required the FAA to provide a report to Congress concerning the security of mail and cargo in transportation by passenger-carrying aircraft. A CONFIDENTIAL report was provided to Congress in August 1992, and an UNCLASSIFIED executive summary was released to the public. The report recommended improvements to cargo security through amendments to the air carrier and indirect air carrier approved security programs. These changes were intended to ensure that indirect air carriers would be responsible for applying appropriate security controls to cargo items under their control. Implementation of new measures began in July 1993.

Because of its special status, mail was considered separately from cargo with respect to civil aviation security. The FAA and the United States Postal Service (USPS) considered taking actions concerning airmail parcels capable of containing items intended to damage aircraft. Implementation of measures that were considered began in May 1994.

Additionally, the FAA and the Department of Defense (DOD) executed an interagency agreement concerning the security of military mail outside the United States.

Airmail Security

- In May 1994, a memorandum of agreement (MOA) between the FAA and the USPS was executed. This agreement serves to coordinate air parcel security programs adopted by the FAA and the USPS. The security programs are intended to prevent the introduction of explosive or incendiary devices into mail parcels that could be transported aboard passenger aircraft.

In the spring of 1995, the FAA and the USPS jointly audited the procedures outlined in the airmail security MOA. The result of this audit identified mail processing procedures to improve the program. The USPS took several actions. First, it canceled its "airport-to-airport" service under which a mailer could specify a particular flight, a process by which that flight might be targeted. Second, it began a system of weekly internal security audits in each of its 10 postal regions. These weekly audits indicated that all the postal regions were carrying out the terms of the agreement under which the majority of certain "profiled" mail parcels are separated from the stream of mail tendered to the passenger air carriers.

Recently, the USPS also modified the Customs forms which customers must complete before overseas outbound parcels can be mailed. These forms now include a "safety" certification for each parcel with a copy to be kept at the post office of origin, thus creating an "audit trail."

With the issuance of the FAA's enhanced security directive in July 1996, the USPS implemented even stronger security measures. Currently, a "profiled" parcel placed in a drop box is returned to its sender. The mailer must then present the parcel in person at a post office.

Air Carriers

Parts 108 and 129 of the Federal Aviation Regulations (14 CFR parts 108 and 129) require U.S. and foreign air carriers to adopt and carry out a security program approved by the FAA. Within the United States, the cargo security requirements for U.S. and foreign air carriers are the same. Various amendments to security programs, including stronger cargo measures, became effective in phases beginning on July 23, 1993. The changes amended certain air cargo security requirements and added or amended certain terminology and definitions regarding air cargo. The primary effect of this amendment involved a change in the definition of the "known shipper" concept. This was done in conjunction with comments from the air carrier industry.

During the period January 1995 to October 1995, the FAA began testing a new data base to record air carrier and airport inspection data. This new format became known as the Air Carrier and Airport Inspection Reporting System (AAIRS). This system was developed to record reports on all aspects of an air carrier's security obligations, including cargo security requirements. During the summer of 1995, the headquarters staff reviewed many of these new reports and noted that the cargo security observations did not appear to be thorough in some cases. On September 9, 1995, the Director of the Office of Civil Aviation Security Operations issued a memorandum to the field recommending ways to improve cargo inspections of air carriers based on the new "narrative" inspection format.

From January 1995 to January 1997, approximately 2,200 comprehensive inspections of air carriers were completed. Only 1.6 percent of these reports indicate that air carriers were not meeting their cargo security obligations.

Indirect Air Carriers

Along with the improved air carrier standards, indirect air carrier standards were also strengthened. Indirect air carriers are now required to adopt and carry out an FAA-approved security program under 14 CFR part 109. To assist in implementing the requirement, the FAA issued a standard security program for indirect air carriers containing definitions, terminology, and requirements for the acceptance of cargo by indirect air carriers that are consistent with the definitions. This was done to give assurance to air carriers that an indirect air carrier, who acts as an intermediary between a shipper and an air carrier, is being held to the same security standards as air carriers are. The IACSSP requirement became effective January 31, 1994. Since that time, over

3,000 indirect air carriers nationwide have adopted the standard program and have been issued FAA approval numbers.

The FAA developed a prototype inspection strategy for indirect air carriers in early 1994. It was field tested in three FAA regional offices (New York, Chicago, and Los Angeles) from September to December 1994. Based on experience in testing the prototype, a national inspection was conducted from August to December 1995. Approximately 500 indirect air carriers were inspected, of which approximately 50 percent did not appear to be meeting all their security obligations. Corrective or legal action was taken on each violation.

International Standards

Currently the International Civil Aviation Organization's (ICAO) Annex 17 concerning aviation security also addresses the cargo and mail being transported on international passenger flights. Chapter 4 of Annex 17 requires that appropriate cargo and mail security controls be in place at all times, and it recommends that all governments ensure that air freight forwarders carry out aviation security programs. ICAO's aviation security panel of experts has suggested that this concept, where cargo security is applied "upstream" by the forwarder, be raised to the level of a mandatory standard. The FAA fully supports this initiative.

Currently all U.S. airlines operating outside the country can only rely on the security procedures carried out by freight forwarders in countries that have adopted a current set of ICAO recommendations (e.g., United Kingdom, Denmark, Finland, Switzerland, Australia, and Japan). If, as is anticipated, this recommended practice were raised to an ICAO standard, all ICAO signatory countries would have freight forwarder security programs in place on which U.S. airlines could rely, just as foreign air carriers can now rely on the FAA required IACSSP.

Realistic Testing

During April 1995, the FAA conducted several unannounced, aggressive tests to gauge the cargo security acceptance practices of air carriers and indirect air carriers. FAA employees posed as "unknown" cargo shippers and attempted to ship packages. Five

- air carriers and four indirect air carriers were tested in this manner. Eight of the nine tests resulted in the regulated parties' accepting the cargo packages improperly. Corrective or legal action was taken on all of the violations.

Recent Inspection Data

During fiscal year 1997, the FAA began establishing a cadre of specialized dangerous goods and cargo security inspectors as a consequence of the May 11, 1996, crash of ValuJet Flight 592. (A complete description of the new program follows in a subsequent section.) The new program is designed to recognize and take advantage of the fact that cargo operations--in the context of both cargo security rules and dangerous goods rules--have more in common with each other than they do with passenger operations, thereby gaining long-term efficiencies in inspections.

The number of inspections has declined because of more thorough inspections. During the first 9 months of calendar year 1997, 239 air carriers were inspected, and compliance problems were noted in 50 inspections (21 percent). By comparison, from October 1994 through December 1996, 2,200 air carriers were inspected, and difficulties were noted in 35 inspections (1.6 percent). With full implementation of the new Dangerous Goods and Cargo Security program, the number of inspections is expected to increase beginning in 1998.

Also, aggressive realistic testing is being incorporated into the FAA's new cargo inspection protocol. As experience in carrying out these tests increases, the results will be used to focus efforts on areas where weaknesses are observed.

Improvements are being documented by others. The DOT's Office of Inspector General is auditing the FAA's cargo security oversight responsibilities. Although the audit report is not yet complete, preliminary data suggest certain qualitative improvements in the application of the standards by air carriers. A significantly greater percentage of
U.S. air carriers questioned the auditors (testers) prior to accepting cargo packages than during the tests conducted by the FAA.

SECURITY STANDARDS

Along with other FAA measures to increase security after the TWA Flight 800 disaster, the FAA strengthened the cargo and mail security standards. This action addressed both the perceived threat to passenger air carriers and the compliance difficulties. Since inspection and test results seemed to indicate that some air carriers and some indirect

air carriers were experiencing difficulty identifying their "unknown" shippers (so their documents could be questioned), the FAA extended the previous "unknown" shipper rules to all cargo and mandated inspections for cargo from "unknown" shippers.

This action sought to ensure that all air carriers and indirect air carriers would comply with the cargo requirements. Passenger air carriers are required to obtain a Shipper's Security Endorsement and identification check for *ALL* cargo. Previously, these endorsements and checks had been required only for cargo from "unknown" shippers.

Foreign air carriers and indirect air carriers were also required to obtain the same information from *ALL* their shippers and for each shipment to certify to the passenger air carrier that the information was on file. The purposes of these rules are to ensure that proper procedures will be followed by all regulated parties. Cargo from "unknown" shippers and indirect air carriers that did not provide the proper shipment certification must be inspected by various authorized screening methods.

For the first time, the FAA also began requiring passenger air carriers to apply security controls to cargo accepted from all-cargo air carriers.

ADEQUACY OF INSPECTION AND SCREENING CARGO ON PASSENGER AIR CARRIERS

As a result of the ValuJet disaster in 1996 and in response to the White House Commission Report , the FAA addressed the adequacy of inspection and screening of cargo on passenger air carriers.

Inspection

The tragic loss of ValuJet Flight 592 on May 11, 1996, drew attention to the tremendous growth in the shipment of air cargo in the previous decade and to the corresponding increase in hazardous materials incidents involving air transportation. The FAA formed a task force within weeks of the accident to review thoroughly the FAA's hazardous materials and cargo security enforcement programs.

A new cargo security and dangerous goods program emerged from this review. It is organized into nine domestic regions and one European region. Inspectors assigned to the program are located at over 38 field offices nationwide and 3 international field offices in Europe. Directed by a headquarters program staff, through 10 regional program

coordinators, agents are responsible for monitoring and enforcing regulations necessary for the safe domestic and international transport of hazardous materials. Agents will monitor the regulatory compliance of hazardous materials shipments and shippers throughout the transportation chain by inspecting passenger and all-cargo air carriers, air freight forwarders, aviation repair stations, and air shippers of hazardous materials. In addition, agents will conduct concurrent cargo security inspections to ensure that all relevant cargo security measures are being applied to all types of cargo, including nonhazardous cargo.

The FAA has combined its cargo security and hazardous materials inspection activities into a specialized discipline and staff. Authority was granted to hire 118 new specialized cargo inspectors, bringing the total to 132. The first vacancy announcements were opened in October 1996. All staff were hired by September 1, 1997.

The new program will concentrate on three areas: inspection/testing, trend analysis, and outreach to the shipping community. Inspections will be more in depth than those now being conducted by the "generalized" work force. Aggressive and realistic testing using a previously developed protocol will be conducted where appropriate. A new inspection data base is now being developed which will be capable of incorporating past compliance histories of shippers, forwarders, and carriers for trend analysis and targeted inspections. This analysis will also be used to identify segments of the shipping community for outreach activities such as presentations, advice, and assistance visits.

The FAA has developed a number of training courses for newly hired FAA personnel. One of these new courses is the Cargo Security Basic Course, which was developed to familiarize the newly hired cargo security and dangerous goods inspectors with the regulatory requirements placed on domestic and international shippers, and on air carriers who submit and accept freight for air carriage. The objectives of this course are:

- to enable the students to demonstrate a detailed understanding of the international air cargo industry and the statutory and regulatory basis for the FAA cargo security and dangerous goods program;
- the documentation required for an air carrier/shipper cargo operation;
- the procedure for comprehensively assessing air carriers; and
- the procedure for assessing dangerous goods and cargo security compliance of regulated entities.

This course will also instruct students to:

- prepare international shipments for carriage;
- guide shippers concerning air freight shipments; and
- complete air waybills.

It will also provide participating students with an overview of industry regulations, international geography and time zones, types of aircraft and their cargo capabilities, air cargo acceptance and booking procedures, and procedures for accepting specialized types of cargo.

The prototype Cargo Security Basic Course was conducted July 28-August 8, 1997, to validate the course content and to correct problems associated with the delivery of the course. The course was successful and will be delivered to all the specialized agents over the course of the next 12 months.

Screening

Currently, among various potential techniques, only high energy x-ray imaging technology is available to screen cargo for carriage on passenger aircraft. Although this technology provides imaging capability for detecting contraband, these systems are not capable of automatically detecting improvised explosive devices or weapons: an operator is required to make a decision based on interpretation of an image. Cargo x-ray screening devices, when compared to x-ray devices designed for baggage screening, are relatively costly and require a significant amount of room for installation and operation.

Over the next year, the FAA will determine the baseline performance of commercially available high energy x-ray devices and other devices in advanced stages of development for screening cargo. If any of these systems show promise, the FAA may evaluate them in an operational environment and/or perform additional research and development to adapt these technologies for cargo screening applications.

The FAA is conducting a study at Los Angeles International Airport to determine the applicability for screening cargo by the InVision CTX 5000SP, an FAA-certified explosives detection system designed for screening checked baggage. The data being collected will include the number of cargo items that can be processed through the CTX 5000SP as well as false alarm data and time required for screening cargo.

The FAA is also investigating the cargo screening potential of nuclear-based explosives detection technologies. In past studies, these nuclear-based techniques have shown some potential for screening cargo. Approaches that use neutrons may have adequate penetration ability, as well as the ability to discriminate explosives from other materials within cargo. The disadvantages of nuclear systems are their complexity, large size, and high cost. The FAA will continue research and development to promote advanced technology prototype nuclear systems tailored for screening cargo in an airport environment.

SUMMARY

The FAA has reviewed and will address all of the White House Commission recommendations. With the FAA's proposed procedures, the enhanced cargo program will lead to a safer and more secure environment for the flying public.

The FAA has significant regulatory responsibility for overseeing passenger operations, as well as cargo operations on passenger flights. However, air cargo operations are usually separated from passenger operations, as passenger and cargo terminals are normally at different locations on the airport. These logistical differences and other factors have caused the FAA to establish the specialized inspection, trend analysis, and outreach programs now underway.

The DOT's hazardous materials rules (which FAA also enforces) appear in a different part of the Code of Federal Regulations than the cargo security rules. However, operational hazardous materials procedures have a great deal in common with cargo security procedures. The FAA anticipates that by combining these procedures, the experience and knowledge developed over time by a specialized cargo inspection work force will result in more efficient and comprehensive oversight.